82004

S/120/60/000/03/045/055
E032/E514

Two Forms of a Titanium Ion-Sorption Pump

pressure 10^{-2} mm Hg, pumping speed for air(at 10^{-6}mm Hg) 30 ℓ/sec and pumping speed for helium(at 10^{-6} mm Hg) 0.5 ℓ/sec. The limiting pressure measured by the LM-2 manometer was found to be 5×10^{-8} mm Hg in a sealed-off pump. The warm-up time was less than 30 min and the anode voltage was switched on at a pressure of less than 10^{-4} mm Hg. It is desirable to use a backing pump incorporating a nitrogen trap. A photograph of the pump is shown in Fig 2. Fig 3 shows the basic arrangement of another pump of this type which has a larger store of titanium. The titanium cylinder A (10 mm dia., 28 mm long) is fixed on a molybdenum rod and is heated by the electrons emitted by the cathodes K. The screen E prevents the molybdenum holder from becoming too hot. The working characteristics of this pump are as follows: power consumed by the cathodes 300 W, anode voltage 1600 V, anode current 130 mA, consumption of titanium 1 mg/min, starting pressure 10^{-4}mm Hg, pumping speed for air(at 2×10^{-7}mm Hg)

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8200!i

S/120/60/000/03/045/055
E032/E514

Two Forms of a Titanium Ion-Sorption Pump

150 ℓ/sec. An active film of titanium will maintain a pressure of 10^{-5} to 10^{-3} mm Hg in a system when the titanium pump is switched off. Acknowledgment is made to G. A. Mishkin for valuable advice. There are 3 figures and 2 tables.

(Note: This is a slightly abridged translation)

ASSOCIATION: Fiziko-tekhnicheskiy institut AN UkrSSR
(Physico-Technical Institute, Ac.Sc., UkrSSR)

SUBMITTED: April 29, 1959

X

Card 3/3

TERENTYEV, I. A.

L 47312-65 EPA(w)-2/EWT(1)/EEC(t)/EWA(m)-2 Pi-4/Ps-6 IJP(c) AT/GS

ACCESSION NR: AT5007922 S/0000/64/000/000/0295/0299

AUTHOR: Val'ter, A. K.; Grigor'yev, Yu. N.; Dudkina, I. N.; Ivanov, V. F.; Il'in, O. G.; Koba, I. I.; Kondratenko, V. V.; Mocheshnikov, N. I.; Tarasenko, A. S.; Terekhov, B. A.; Tolstoy, A. Ye.; Shenderovich, A. M.; Grishayev, I. A.

TITLE: The apparatus of the Physicotechnical Institute, Academy of Sciences, Ukrainian SSR, for colliding electron beams with energies of 200 x 100 Mev for experiments on the scattering of electrons on electron

SOURCE: International Conference on High Energy Accelerators. Dubna, 1963. Trudy. Moscow, Atomizdat, 1964, 295-299

TOPIC TAGS: high energy accelerator, high energy plasma, particle beam, particle physics, charged particle beam

ABSTRACT: Work on colliding electron beams in the Physicotechnical Institute, Academy of Sciences, Ukrainian SSR, was begun in 1960. The existence of linear electron accelerators was basic for the initiation of such work. At the first stage, it was decided to stop at electron storage devices of 100 Mev energy, since it was found that even at such comparatively small energies of the colliding beams

Card 1/5

many problems can be solved. The most convenient storage design is a system of race-tracks with a common linear section in which the collision of the two beams is effected. A distinctive property of the Institute's storage device is the great lengths of the linear sections, equal to 50 and 80 cm for a radius of revolution of 50 cm. The great length of one pair of linear sections in each of the rings was selected in order to provide for measurement of the minimum angle of scattering. Selection of a small radius of revolution was due to the requirement of minimum equilibrium dimensions of the beam and to the tendency to have a not too long time for damping of the beam oscillations. To localize the region of interaction, the beam orbits are distorted in the vertical plane by means of two "intersecting" magnets that create a homogeneous field in the radial direction. The magnets are arranged in the common linear section. The length of each of the "intersecting" magnets equals 10 cm, and the magnetic field strength is up to 640 oersteds. The magnets deflect the equilibrium orbit by 1 cm from the median plane. The quadrants have a constant magnetic field index of $n = 0.425$. The coupled magnets in the section that is common for both orbits have zero gradient; the index in the remaining sections is $n_1 = 0.450$. The stability of the Institute's system is characterized by a diagram showing field index n in the quadrants versus the field index n_1 in the coupled magnets. The regions of stability and resonance lines of various

orders are indicated in the diagram and discussed. The selected operating point is at a maximum distance from the resonances; in this case the frequencies of betatron radial and vertical (axial) oscillations are respectively equal to $\nu_r = 1.145$; $\nu_z = 0.6956$. The internal dimensions of the vacuum chamber were 100 × 40 mm. The determining problem here was the conditions governing the beam input into the storage device. The beam is fed to an inflector through a magnetic channel. The initial conditions are so chosen that the beam can by-pass in the first six revolutions the inflector set a distance of 2.25 cm from the equilibrium orbit. The behavior of the storage device in the first six revolutions is described. In case the trailing edge of the magnetic field pulse lasts for three revolutions of the particles in the storage device, the introduction of particles into the chamber can also be prolonged in the course of three revolutions. In order to capture particles in the storage device it is necessary to create with the help of inflector magnets a magnetic field strength of $H_I = 1900$ oersteds, $H_{II} = 2630$ oersteds. The system of tolerances is evaluated on the assumption of the following parameters for the input beam: width $a = 0.5$ cm, height $b = 0.3$ cm, angular divergence: radial $\Delta\gamma_r = 2 \cdot 10^{-3}$ and vertical $\Delta\gamma_z = 5 \cdot 10^{-4}$. Preliminary measurements indicate that this data can be realized in the case of the Institute's apparatus. The requirements on

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ACCESSION NR: AT5007922

the stability of the magnetic field of the inflector are: $\Delta H_I/H_I = 10\%$, $\Delta H_{II}/H_{II} = 3\%$. Taking into consideration the indicated quantities, the maximum values of the curvature of the radial betatron oscillations will be equal respectively to $F_I = 7.8$ cm, $F_{II} = 4.1$ cm. According to computations, the equilibrium dimensions of the beam must be $a_z = 0.04$ cm; $a_r = 0.2$ cm. Due to the quantum fluctuations in synchrotron radiation, the longitudinal dimension of the particle bunch equals 40 cm for a gap voltage of about 1.5 kilovolts. The mean energy expended on an electron per revolution, taking into account the coherent radiation, is equal to 220 electron-volts. The time of oscillation damping amounts to 100 msec. Alternate injection of the beam of electrons in the ring is effected by three sector magnets with double focusing. The introduction of a beam turned away from the accelerator and with zero initial conditions is ensured by the application of a cylindrical magnetic shield with a shielding coefficient varied along the length. All the magnets are supplied with power from sources that have a current stability of at least 0.02%. The report also discusses the vacuum chamber, voltage generator, and a few other aspects of the apparatus. Orig. art. has: 5 figures, 2 tables.

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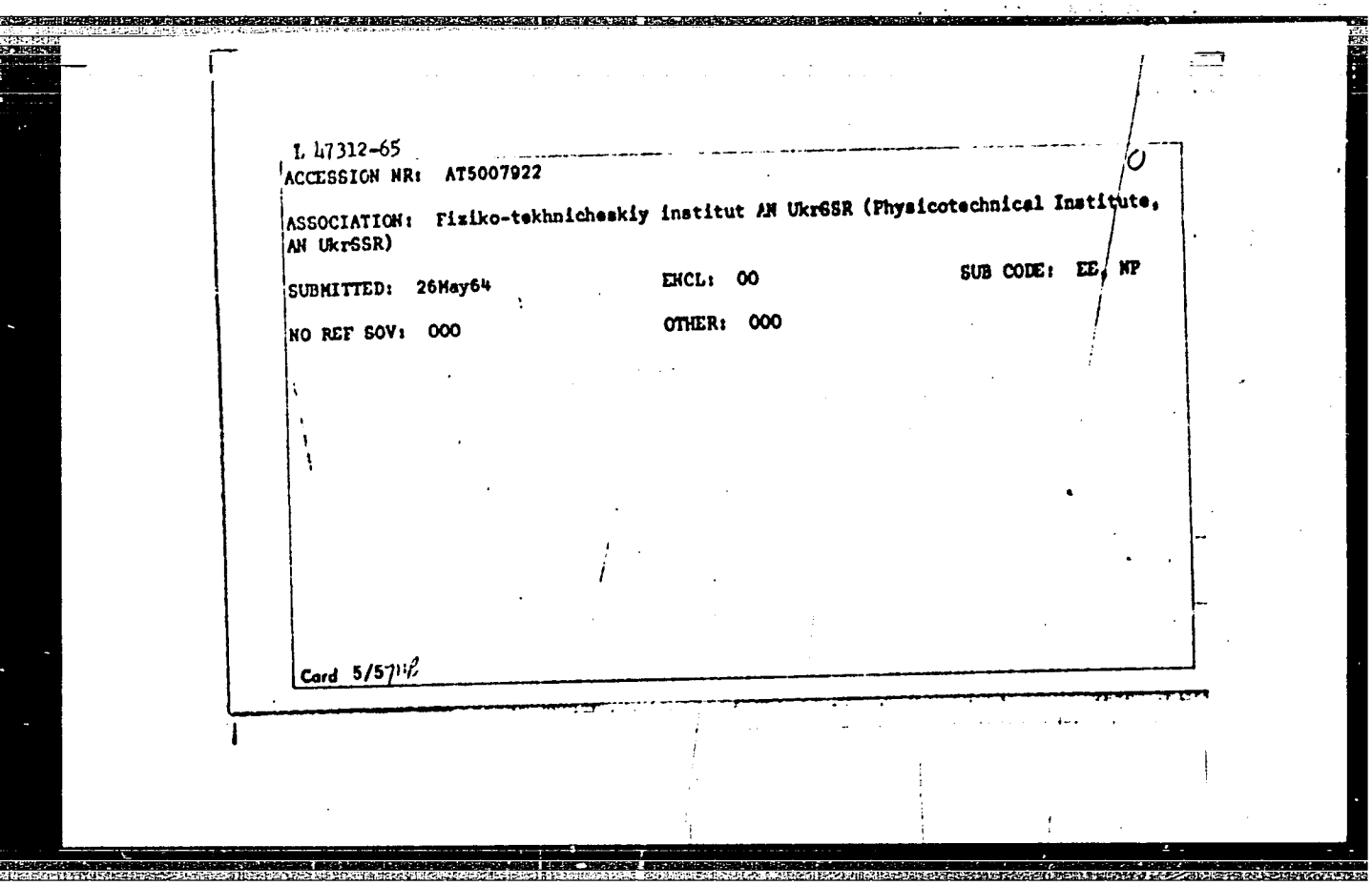

L 47312-65
ACCESSION NR: AT5007922

ASSOCIATION: Fiziko-tekhnicheskiy institut AN UkrSSR (Physicotechnical Institute, AN UkrSSR)

SUBMITTED: 26May64 ENCL: 00 SUB CODE: EE, NP

NO REF SOV: 000 OTHER: 000

Card 5/5

TEREKHOV, B. G.

USSR/Engineering
Hammers, Steam
Fuel Conservation

Sep 1[illegible]

"Efficient Operation of Steam Hammers," I. Ya. Varshavskiy, B. G. Terekhov, 3½ pp

"Za Ekonomiyu Topliva" Vol IV, No 9

Hammers using either steam or compressed air are the main users of fuel in the general fuel balance of industries, at times using up as much as 50 percent of the fuel in this energy balance. Therefore methods for economy of energy by these hammers would result in an economy of energy by these hammers would result in an economy of fuel for the whole industry. The author states various methods of cutting down the energy used by these hammers. Gives a performance graph and several tables of operating data.

PA-23T23

TEREKHOV, B.G.

Experience in adjusting 55-B piston compressors. Prom.energ. 16 no.11:6-8 N '61. (MIRA 14:10)

(Compressors)

S/169/62/000/010/011/071
D228/D307

AUTHORS: Gnilko, L.K. and Terekhov, B.I.

TITLE: Using magnetic properties to ascertain the age of intrusive rocks in East Sayan

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 10, 1962, 13, abstract 10A83 (Byul. nauchno-tekhn. inform. N-vo geol. i okhrany nedr SSSR, no. 1 (29), 1961, 59-62)

TEXT: The magnetic properties of rocks in East Sayan are being studied for age correlation purposes. A table of the magnetic characteristics of rocks is given. The susceptibility $\varkappa$ and the remanent magnetization I_2 was determined by A.A. Logachev's method on M-2 (M-2) and Askania-Werke instruments. It was found that: 1) the magnitudes of $\varkappa$, I_r, and I_r/I_i are constant for a given type of rocks of a certain age; 2) within coeval intrusions the values of $\varkappa$ and I_r increases from acid to basic rocks if the value of I_r/I_i for different rock types is constant; 3) the values of $\varkappa$,

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Using magnetic properties ...

I_r and I_r/I_i increase with increasing age of each rock type, and the degree of their increase differs within the same type; and 4) the ratio I_r/I_i for the Lower Paleozoic intrusions of East Sayan studied by the authors coincides with that in A.G. Komarov's data for intrusions of the same age in Tripolyarnyy Ural.
[Abstracter's note: Complete translation]

Card 2/2

S/169/62/000/005/032/033
D228/D307

AUTHOR: Terekhov, B. I.

TITLE: Trial quantitative interpretation of magnetometer data in the case of a magnetic deposit

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 5, 1962, 33, abstract 5A256 (Byul. nauchno-tekhn. inform. M-vo geol. i okhrany nedr SSSR, no. 1 (29), 1961, 62-66)

TEXT: The analysis of magnetic anomalies showed that known orebodies cannot explain the magnetic field. The presence at a certain depth of large magnetite deposits, which were exposed later by drilling, was predicted as a result of careful quantitative interpretation. It is pointed out that in the interpretation it is necessary to take into account the possibly more accurate geologic structure of the zones, close to the day surface, and to provide a certain amount of drilling for this purpose. This will permit the more precise definition of the parameters of the orebodies of the lower horizons and the decreased expenditure for their exploration.
/Abstracter's note: Complete translation./
Card 1/1

TEREKHOV, B.M., inzhener.

A highly efficient snowplow is needed. Avt.dor.18 no.6:11 O '55. (MLRA 9:2)
(Snowplows)

ZAKHAROV, V.I.; SIMONOVA, V.F.; MARITS, N.M.; ABRAMOVA, L.A.; TERKHOV, B.M.; PIMONOVA, G.V.

Natural focus and epidemiology of human parasitic diseases in the Moldavian S.S.R. Zdravookhranenie 2 no.5:28-31 S-O '59.
(MIRA 13:4)

1. Iz kafedry obshchey biologii i parazitologii (zaveduyushchiy - prof. V.I. Zakharov) Kishinevskogo meditsinskogo instituta.
(MOLDAVIA--PARASITOLOGY)

TEREKHOV, B.P.

Semiautomatic line for lacquering bent chairs in a high voltage electric field. Der.prom. 11 no.6:17-18 Je '62. (MIRA 15:6)
(Kishinev--Furniture industry--Equipment and supplies)
(Spray painting, Electrostatic)

TERSKHOV, B.V.

Engineers and technicians of the woodworking industry in the Moldavian S.S.R. struggle for technological progress. Der. prom. 11 no.12:25-26 D '62 (MIRA 18:2)

TEREKHOV, [illegible]

On a section of track repair. Put' 1 put. kroz. 9 no.7:42 '65.
(MIRA 18:12)

TEREKHOV, F.A.

Strict planning is the basis of successful work. Put' i put' khoz. 8 no.6:35-37 '64. (MIRA 17:9)

1. Stantsiya Rossosh', Yugo-Vostochnoy dorogi.

TEREKHOV, F.A.

Results of regulation violations. Put' i put'khoz. 8 no.8:45-46 '64. (MIRA 17:9)

TEREKHOV, G.A.

Increasing Labor Productivity in Machine Building (Voprosy povysheniya proivoditel'nosti truda v mashinostroenii) Gosudarstvennoye nauch-tekh. izdat. mashinostroitel'. literatury, Moscow, 1957. 511 pp.
(Table of Contents authors below)

This collection presents a comparative tech. and economic analysis of most effective methods and industrial processes for obtaining high labor productivity in machine building. Output may be stepped up by further standardization of machine tools, materials, and production methods; drawing on unused potentials. Covers all stages of planning and production as performed in modern plants of USSR, actual experience, and new methods are discussed.

TEREKHOV, G. A., "Use of Small-Scale Automation in Metal Processing," p. 168.

ГЕРЕКНОВ, Г.А.

25(5) PHASE I BOOK EXPLOITATION SOV/2394

Moscow. Dom nauchno-tekhnicheskoy propagandy imeni F.E. Dzerzhinskogo

Kompleksnaya avtomatizatsiya i mekhanizatsiya v mashinostroyenii; sbornik statey (Overall Automatization and Mechanization in Machine Manufacturing; Collection of Articles) Moscow, Mashgiz, 1959. 312 p. 8,000 copies printed.

Additional Sponsoring Agency: Obshchestvo po rasprostraneniyu politicheskikh i nauchnykh znaniy RSFSR.

Ed.: A.N. Malov, Candidate of Technical Sciences; Tech. Ed.: B.I. Model'; Managing Ed. for Literature on Metalworking and Toolmaking (Mashgiz): R.D. Beyzel'man, Engineer.

PURPOSE: This collection of articles is intended for engineering and technical personnel of plants manufacturing machines and instruments.

COVERAGE: This book acquaints industrial workers with devices

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and equipment necessary for the overall mechanization and automatization of technological processes in machine manufacturing. Individual articles deal with general problems of automatization and mechanization of processes in preparatory, machine, and assembly shops, and with problems arising from the introduction of transfer lines. The book also includes examples of devices and equipment tested and used under actual plant conditions. The source of these data was the meeting on overall mechanization and automatization of technological processes held in 1957 by the Moskovskiy Dom nauchno-tekhnicheskoy propagandy imeni F.E. Dzerzhinskogo (Moscow House for Scientific and Technical Propaganda imeni F.E. Dzerzhinskiy). No personalities are mentioned. Several of the articles are followed by references.

TABLE OF CONTENTS:

Overall Automatization (Cont.) SOV/2394

AVAILABLE: Library of Congress JG/cc
10-16-59

Card 5/5

PHASE I BOOK EXPLOITATION SOV/4525

Terekhov, Georgiy Aleksandrovich, Docent, and Yuliy Avraamovich Shuvalov, Candidate of Technical Sciences

Avtomatizatsiya tekhnologicheskikh protsessov mekhanicheskoy obrabotki i sborki v mashinostroyenii (Automation of Mechanical Working and Assembly Processes in Machine Building) Moscow, Mashgiz, 1960. 320 p. Errata slip inserted. 20,000 copies printed.

Reviewer: A.V. Ettel', Engineer; Ed.: P.A. Kunin, Engineer; Managing Ed. for Literature on Metal Working and Machine-Tool Making (Mashgiz): V.I. Mitin, Engineer; Tech. Ed.: T.F. Sokolova.

PURPOSE: This book is intended as a textbook for students in machine-building tekhnikums.

COVERAGE: Basic information is given on the automation of machining of blanks and the assembling of machine parts. The authors present the fundamentals of feeding of automatic machines, clamping of blanks, and dimensional control of blanks and finished parts. Problems of designing mechanized systems with

Card 1/6

copying and other types of automatic program control are discussed briefly inasmuch as they are treated in the course "Metal-Cutting Machine-Tools". Information on planning the processing of parts on the transfer machines and hoisting, conveying and reloading devices is also discussed. The contributions to automation made by I.N. Voznesenskiy, Corresponding Member of the Academy of Sciences USSR, and A.A. Andronov, Academician, are mentioned. There are 40 references, all Soviet.

TABLE OF CONTENTS:

DEMENT'YEV, V.I , kand. tekhn. nauk; OGRINCHUK, A.N., kand. tekhn. nauk; TEREKHOV, G.A., dots.; SHLYAPNIKOV, A.I., dots.; SHUVALOV, Yu.A., kand. tekhn. nauk; KAMENIR, Ya.A., kand. tekhn. nauk, retsenzent; PANTELEYEV, V.V., inzh., retsenzent; BAZHENOV, D.V., red. izd-va; UVAROVA, A.F., tekhn. red.

[Means for the automation of machining processes; manual] Sredstva avtomatizatsii mekhanicheskoi obrabotki; spravochnoe posobie. Moskva, Mashgiz, 1962. 520 p. (MIRA 15:3)
(Metalcutting) (Automation)

TEREKHOV, G.A.

System of differential equations for the working process of percussion air drills. Zap. LGI 47 no.1:20-29 '62. (MIRA 16:5)
(Boring machinery) (Differential equations)

TEREKHOV, G.A.; SHKOL'NIKOV, A.D.

Electric modeling of periods of the working cycle of a percussion air drill. Zap. LGI 47 no.1:30-36 '62. (MIRA 16:5)
(Boring machinery—Electromechanical analogies)

TEREKHOV, G.A., inzh.; SHKOL'NIKOV, A.D., assistent

Electronic simulation of the working cycle of an air drill. Izv. vys. ucheb. zav.; gor. zhur. 6 no.4:68-78 '63. (MIRA 16:7)

1. Leningradskiy ordena Lenina i ordena Trudovogo krasnogo Znameni gornyy institut imeni G.V. Plekhanova. Rekomendovana kafedroy gornoelektromekhanicheskogo tsikla.
(Boring machinery--Models)

33881

S/640/61/000/000/002/035
D258/D302

21.2100

AUTHORS: Ivanov, O. S. and Terekhov, G. I.

TITLE: The equilibrium diagram and structure of alloys in the system uranium-niobium

SOURCE: Akademiya nauk SSSR. Institut metallurgii. Stroyeniye splavov nekotorykh sistem s uranom i toriyem. Moscow, Gosatomizdat, 1961, 20-34

TEXT: The system uranium-niobium was studied in view of its potential use as a high-melting nuclear fuel. Niobium was found to be a promising component because of its low thermal neutron cross-section, its crystalline structure, isomorphous with that of γ-U, and its high melting point. The present work is thought to clarify the nature of the equilibrium between α, β and γ phases in the uranium corner of the diagram. Specifically, 65 alloys were prepared by melting together 99.69% pure U and 98.2% pure Nb powder in either an induction or an arc furnace, under reduced pressures of

Card 1/4

The equilibrium diagram ...

purified argon or at 10^{-2} mmHg. The specimens were annealed for 48 - 72 hours at 1000 - 1250°C, depending on their Nb contents. They were investigated by chilling them at different temperatures and analyzing afterwards by X-rays, microstructural, thermal, and dilatometric methods. A resulting equilibrium diagram is given. The hardness curve of samples quenched from 1000°C shows a maximum of 400 kg/mm^2 at 5 at.-% of Nb, corresponding to the martensitic transformation, $\gamma \rightarrow \alpha'$; a minimum at 17.5 at.-% of Nb is followed by a smooth maximum, the latter indicating a continuous series of solid solutions. The X-ray pattern of a 17 at.-% containing alloy (quenched from 900°C) shows a body-centered, tetragonal lattice, with the calculated dimensions of a = 3.531 kX and c = 3.360 kX. These parameters decrease with increasing Nb contents of the alloy. Prolonged annealing at 840°C, of samples containing 30 - 65 at.-% of Nb caused the solid solution to be partially decomposed in two phases: γ and γ_{Nb}. This two-phase region reaches its maximum at 990°C and ~50 at.-% of Nb, as ascertained by x-ray data and micro-

Card 2/4

The equilibrium diagram ...

graphy of samples quenched from 910°, 850°, 1000° and 1070°C. The equilibrium, γ-solid solution:ß-solid solution in the uranium-rich section was established with the aid of micrography. Dilatometric and thermal analyses failed to establish (1) the solubility of Nb in α-U and (2) nature of the invariant equilibrium between the α, ß and γ phases. The latter was accomplished by first homogenizing alloys containing 0.01 to 11 at.-% of Nb, dividing each sample in 3 lots heating each lot for 600 hrs at 630°, 637° and 645°C, respectively, and finally quenching the samples in water. The resulting hardness curve does not indicate sharply defined boundaries. X-ray patterns reveal gradually developing γ_{Nb}-lines, beginning from 2 at.-% of Nb. The parameters of the α-phase are practically the same as those of pure U; those of γ_{Nb} (a = 3,340 kX) correspond to a Nb-content of 75 at.-%. The solubility problem was solved by testing the hardness of alloys, quenched from 630°C and held afterwards at 500°C for 2 mins, and 24 hrs. The resulting ageing curves show that Nb is practically insoluble in α-U. The existence of the (α + ß) region and the eutectoid reaction ß $\rightleftarrows \alpha + \gamma_{Nb}$ (at 670°C)

Card 3/4

The equilibrium diagram ...

were established by indirect methods. The differences between the equilibrium diagrams of the systems U-Mo and U-Nb are explained in terms of their respective thermodynamic potential curves. There are 10 figures, 2 tables and 1 Soviet-bloc reference.

Card 4/4

33892

S/640/61/000/000/013/035
D205/D302

21.2100

AUTHORS: Ivanov, O. S. and Terekhov, G. I.

TITLE: Polythermic sections of the phase diagram unranium-niobium-molybdenum

SOURCE: Akademiya nauk SSSR. Institut metallurgii. Stroyenie splavov nekotorykh sistem s uranom i toriyem. Moscow, Gosatomizdat, 1961, 199-213

TEXT: The aim of the investigation was to construct phase diagrams of the binary U-Nb system and the ternary U-Nb-Mo system in order to obtain data for the technological production of alloys suitable for reactor service. Special attention was given to the γ-solid solutions. On the basis of previous data, it is assumed that Nb and Mo form a continuous series of solid solutions. The alloys were prepated by smelting in an arc or in high-frequency furnaces, using U - 99.78%, Nb - 99.2% and Mo - 99.9% pure. Thermal treatment under vacuum was used followed by immediate quenching in water. Alloys homogenized at 1100 - 1250°C for 48 - 72 hours were etched for the

Card 1/3

Polythermic sections of ...

investigation of the microstructure and hardness. Phase X-ray analysis was also performed. Polythermic sections with atomic ratios Nb : Mo = 3:1, 1:1, 1:3 were studied and are represented graphically. Conclusions: In the system U-Nb-Mo the two-phase region of two solid solutions based on γ-U and γ-Mo (Nb) - which reaches the solidus line in the system U-Mo - is removed from the solidus surface between the two sections with Nb : Mo ratios 3:1 and 1:1. Thereafter, the bell-shaped surface under which the two-phase region is placed approaches the binary U-Nb system, forming on it a curve of mutual solubility with a maximum at 1000°C and 50 % at. Nb. The surface of limiting simultaneous solubility of Mo and Nb is strongly bent towards the U corner of the diagram, the solubility of these elements in γ-U decreasing sharply moving to the sections Nb : Mo = 1:1 and 1:3. This limits the possibility of obtaining more heat-resisting alloys than the binary U-Mo and U-Nb. Heat-resisting alloys rich in Nb and poor in Mo or vice-versa are the only ones possible. The position of the 3-phase equilibrium $\gamma \rightleftarrows \beta + \gamma_{Nb}$ is explained. There are 11 figures and 7 references: 6 So-

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S/640/61/000/000/013/035
D205/D302

Polythermic sections of ...

viet-bloc and 1 non-Soviet-bloc.

Card 3/3

33893

S/640/61/000/000/014/035
D205/D302

21.2100

AUTHORS: Ivanov, O. S. and Terekhov, G. I.

TITLE: Isothermic sections at 560, 500°C and the phase diagram of the ternary system uranium-niobium-molybdenum

SOURCE: Akademiya nauk SSSR. Institut metallurgii. Stroyenie splavov nekotorykh sistem s uranom i toriyem. Moscow, Gosatomizdat, 1961, 214-227

TEXT: The nature, structure, and phases of the U-Nb-Mo system in the range 500 - 550°C are of interest because this is the average temperature range of nuclear reactors. The methods and materials employed were described earlier (Ref. 2: This publication, 199-214). It was assumed that at 560 - 570°C a quarternary eutectoidal equilibrium takes place. Alloys with constant U content of 80, 70, 60% and of a part of the Nb : Mo ß 1:15 section were investigated in the 500°C isothermic section, while at 560°C the alloys at constant U content of 90 and 40% were also investigated. The isothermic sections are represented graphically as are also the changes

Card 1/2

33893
S/640/61/000/000/014/035
D205/D302

Isothermic sections at ...

of hardness and lattice parameter at the corresponding temperatures. Finally, the projection of the diagram on the concentration triangle and the graphical scheme of non-variant and univariant equilibria in the U-Nb-Mo system from 1500°C down to 565° are given. There are 11 figures and 2 Soviet-bloc references.

Card 2/2

33894
S/640/61/000/000/015/035
D205/D302

21.2100

AUTHORS: Ivanov, O. S. and Terekhov, G. I.

TITLE: Isothermic sections for 1200 - 575°C and phase diagrams of the system uranium-niobium-molybdenum

SOURCE: Akademiya nauk SSSR. Institut metallurgii. Stroyenie splavov nekotorykh sistem s uranom i toriyem. Moscow, Gosatomizdat, 1961, 228-248

TEXT: The data of the polythermic sections previously described by the authors (Ref. 1: This publication, 199-213) are plotted on isothermic sections for 1200°, 1000°, 800° and 700°C. In addition, sections at 600° and 675°C were investigated by the study of alloys having the ratio Nb:Mo = 1:15. All these sections are represented graphically and described. Changes of hardness, lattice parameter and phase transformations are discussed. Conclusions: The equilibrium $\gamma \leftrightarrows (\alpha+\gamma\text{-Nb - Mo})$ recedes into the ternary system from the peritectoidal reaction which takes place at 642°C and spreads out in the system shifting towards the U-Mo side. The γ-solid solution

Card 1/2

Isothermic sections for ...

composition is shifted simultaneously towards the molybdenum corner. With the decrease of temperature in the 600 - 575°C range, a further decrease of the spread of the δ-phase homogeneous region takes place. There are 13 figures and 1 Soviet-bloc reference.

Card 2/2

33895
S/640/61/000/000/016/035
D205/D302

21.2100

AUTHORS: Ivanov, O. S. and Terekhov, G. I.

TITLE: Transformations of the γ-solid solution during quenching and annealing in the systems uranium-niobium and uranium-niobium-molybdenum

SOURCE: Akademiya nauk SSSR. Institut metallurgii. Stroyeniye splavov nekotorykh sistem s uranom i toriyem. Moscow, Gosatomizdat, 1961, 249-264

TEXT: The systems U-Nb and U-Nb-Mo which have wide regions of γ-solid solutions, present possibilities of martensitic transformations and allow a wide choice of thermal treatments of alloys to achieve their most useful characteristics. The aim of the present work was to follow the decomposition of the quenched state by measuring the hardness after multiple annealings at different temperatures. Stability of the alloys, resistance to softening and coagulation of the dispersed structures were also studied. The changes of hardness of the ternary system alloys of sections

Card 1/3

Transformations of the ...

Nb:Mo = 3:1, 1:1, 1:3, quenched from 1000°C are presented graphically. The same is done for these alloys after annealing for 3 - 100 hours in the 400 - 550°C range. A similar course of investigation was followed for the binary system U-Nb, special attention being given to alloys of 90, 80, 70, 60 and 40 at.-% of U. The annealing at 400 - 550°C of alloys quenched from the γ-region of the binary U-Nb system having up to 30 at.-% Nb causes the decomposition of the α- and γ-solid solutions with a marked change in hardness. From 35% Nb the hard γ-solution was found to be stable after 125 hours at 400 - 550°C. Alloys of the ternary system located at the mentioned sections show, after the annealing treatment, that simultaneous alloying by Nb and Mo gives no improvement in alloying by each of the elements separately. This holds for the preservation of hardness after annealing and for the stability of the γ-solutions as well. Study of the structure of the annealed alloys revealed that the decomposition of the γ-solution in the ternary system is slower than in the corresponding binary U-Nb and U-Mo systems, at equal contents of alloying components. The γ-solution is most stable in the alloys at U content of 80, 70, 60 and 40 at.-% at the Nb:Mo ratio of ~27:73. Annealing for 1100 hours

Transformations of the ...

brings about the complete decomposition of the γ-solid solution. Judging by the hardness, the most stable in all respects are the alloys having 80-70% U. The slightly alloyed (up to 2 - 3%) U-Nb alloys are of practical interest as they are capable of preserving for prolonged periods, at 400 - 500°C, the finely dispersed quasi-isotropic state. There are 10 figures and 6 references: 5 Soviet-bloc and 1 non-Soviet-bloc. The reference to the English-language publication reads as follows: R. J. Van Thyne and D. J. McPherson, Trans. Amer. Soc. Metals, 49, 576-597 (1957).

Card 3/3

TITLE: IV All-Union Conference on Physico-chemical Analysis

PERIODICAL: Atomnaya energiya, v. 10, no. 4, 1961, 406-407

TEXT: The IV Vsesoyuznoye soveshchaniye po fiziko-khimicheskomu analizu (IV All-Union Conference on Physico-chemical Analysis), convened by the Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova AN SSSR (Institute of General and Inorganic Chemistry imeni N. S. Kurnakov, AS USSR) and the Institut metallurgii im. A. A. Baykova AN SSSR (Institute of Metallurgy imeni A. A. Baykov, AS USSR), was held from December 6 to 10, 1960 on the occasion of the 100th anniversary of the birthday of N. S. Kurnakov. Part of the 142 reports made at the Conference dealt with problems of the atomic industry, including reports on the physico-chemical analysis of thorium, uranium, plutonium, and their alloys, as well as of zirconium and beryllium (O. S. Ivanov); "radiation phenomena and new problems of physico-chemical analysis" (V. I. Spitsyn); structure and constitution diagrams of the ternary systems thorium - zirconium - uranium (G. K. Alekseyenko and T. A. Badayeva), uranium - molybdenum - zirconium (G. M. Barrow), uranium - zirconium - niobium (G. I. Gornov), uranium - niobium - molybdenum (G. I. Terekhov); and physico-chemical analysis of metallic system with rare metals (Ye. M. Savitskiy). V. F. Terekhova reported experimental and theoretical data on rare-earth alloys and presented new constitution diagrams of alloys of yttrium, neodymium, and gadolinium with magnesium, of yttrium and neodymium with aluminum, and of gadolinium with iron and nickel; furthermore, she described the properties of the latter. M. A. Tylkina held a report on tests of alloys of rhenium, tantalum, and tungsten, and also on reactions between these alloys and elements of the 4th, 5th, 6th, 7th, and 8th group.

Structure and Properties (Cont.) SOV/6384

IVANOV, O. S.
Card 3/10 Stroyeniye i svoystva splavov urana, toriya i tsirkoniya, sbornik statey (Structure and Properties of Uranium, Thorium, and Zirconium Alloys; Collection of of Articles) Moscow, Gosatomizdat, 1963. 378 p. 2000 copies printed.

TEREKHOV, G. I.

... and Properties (Cont.)

... yeva, T. A., and R. I. Kuznetsova. Phase Diagra... Uranium-Chromium System

... nov, L. I., L. A. Rubtsova, and O. S. Ivanov. The ...structure of Uranium-Rich Alloys of the Uranium-Titani... ...dium System at 1000°, 650°, and 600°C

Terekhov, G. I., and R. Kh. Tagirova. Polythermal Sections of the Uranium-Niobium-Molybdenum Ternary Phase Diagram at ... = 1/7 (at%) and at 80 (at%) Uranium

...gil'yev, Yu. S., and O. S. Ivanov. Decomposition of ...olid Solution in Uranium-Niobium and Uranium-Zirconium ...bium Alloys 10

...gil'yev, Yu. S. Change in γ-Phase Region in the Phase Diagram of the Uranium-Zirconium-Niobium-Molybdenum System ... Temperatures Below ... 116

...10

TERE:KHOV, G. I.

[illegible] and Prop[illegible] of Uran[illegible], Thorium, [illegible]oys; Collection of Articles) Moscow, Gosatomizdat, 196[illegible] [illegible]000 copies printed.

[illegible]eva, T. A., and [illegible]. Alekseyenko. Structure of [illegible]ys of the Thorium-Zirconium-Niobium System

[illegible]yeva, T. A., and G. N. Alekseyenko. Corrosion Prop[illegible] of Thorium-Zirconium-Niobium Alloys

[illegible]va, T. A., and L. I. Rybakova. Structure of $ThSi_2$-[illegible]

PART III. ZIRCONIUM-BASE ALLOYS

[illegible]eva, T. A., and L. I. Rybakova. Structure of Binary Zirconium-Bismuth and Zirconium-Lead Alloys in the Solid [illegible]

Terekhov, G. I., and O. S. Ivanov. Phase Diagram of th[illegible] Zirconium Corner of the Zirconium-Chromium-Tin System

[illegible] 3/10

Card 9/10

1. TEREKHOV, G. N.

2. USSR (600)

3. Hemorrhagic Fever - Uzbekistan

4. Pathological anatomy of hemorrhagic fever in Uzbekistan. Vop. kraev. pat. No. 2, 1952.

9. Monthly List of Russian Acessions, Library of Congress, February, 1953. Unclassified.

TEREKHOV, G.N., professor; KRUT'KO, N.P., kandidat meditsinskikh nauk

Work of the Tashkent Province Society of Pathoanatomists during 1954 to 1955. Arkh.pat. 18 no.8:127-129 '56. (MLRA 10:2)

1. Predsedatel' Tashkentskogo oblastnogo obshchestva patologoanatomov (for Terekhov). 2. Sekretar' Tashkentskogo oblastnogo obshchestva patologoanatomov (for Krut'ko)
(ANATOMY, PATHOLOGICAL)

TEREKHOV, G.N., prof.; KRUT'KO, N.P., kand.med.nauk

Work of the Tashkent Province Society of Pathoanatomists in 1957. Arkh.pat. 21 no.2:91-92 '59. (MIRA 12:12)

1. Predsedatel' Tashkentskogo oblastnogo obshchestva patologoanatomov (for Terekhov). 2. Uchenyy sekretar' Tashkentskogo oblastnogo obshchestva patologoanatomov (for Krut'ko).
(TASHKENT PROVINCE--PATHOANATOMICAL SOCIETIES)

TEREKHOV, G.N.; KRUT'KO, M.P.

Annual report of the Tashkent Province Pathoanatomical Society for 1959. Med. zhur. Uzb. no.4:73 Ap '60. (MIRA 15:3)
(TASHKENT PROVINCE—MEDICAL SOCIETIES)

ISAKOV, A.A. (Kemerovskaya oblast'); ZHURGARAYEV, Amangel'dy (Dzhambul'-skaya obl., KazSSR); VLADIMIROV, A. (Asbest); FRIMAN, L.I. (Yaroslavl'); KILIMNIK, Ya.Ye. (Vinnitsa); TEREKHOV, I.A. (Skopin); AKDAULETOV, N.A. (pos.Mertuk, KazSSR); ZAKHARKIN, V.Ye. (pos.Rudtsev, Tul'skaya oblast'); SHESTOPAL, G.A. (Moskva); KOTIY, O.A. (Yaroslavl'); GAUKHMAN, V.A. (Moskva); LOPSHITS, A.M. (Yaroslavl'); SERGUSHOV, S.A. (Yaroslavl'); GOTMAN, E.G. (Pechora); VETROV, K.V. (Putintsevo, Vostochno-Kazakhstanskoy obl.); MIKHELEVICH, Sh.Kh. (Daugavpils); SKOPETS, Z.A. (Yaroslavl'); RYBKOV, L.M. (Yaroslavl'); CHEGODAYEV, A.I. (Gavrilov-Yam)

Problems. Mat.v shkole no.6:85-92 N-D '62. (MIRA 16:1)
(Mathematics--Problems, exercises, etc.)

YUPKO, L.D.; TRUBETSKOV, K.M.; GURSKIY, G.L.; TEREKHOV, I.A.; GUSEV, V.F.; VOYTOV, A.O.

Accelerating open-hearth furnace smelting with an increased use of oxygen. Stal' 23 no.1:16-19 Ja '63. (MIRA 16:2)

1. Zavod "Zaporozhstal'", TSentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii i TSentroenergochermet.
(Open-hearth process) (Oxygen--Industrial applications)

TEREKHOV, I. B.

TEREKHOV, I. B. "The organization of rectification work," In the symposium: Materialy tekhn. soveshchaniy po putevym rabotam (M-vo rech. flota SSSR), Moscow, 1949, p. 69-71

SO: U-5240, 17Dec53, (Letopis 'Zhurnal 'nykh Statey, No. 25, 1949).

TEREKHOV, I.B., inzhener.

Use of a sandy soil and asphalt mixture for reinforcing embankments. Rech. transp. 13 no.1:32-35 Ja-F '53. (MLRA 6:11)
(Embankments)

TEREKHOV, I.B., inzh.

Using the method of refilling railroads in the construction of demonstration slips. Rech. transp. 17 no.12:36-38 D '58. (MIRA 12:1)

(Docks) (Dredging)

CHEKRENEV, A.I., doktor tekhn. nauk, prof.; ILINSKIY, V.A., dots. [deceased]; GRISHANIN, K.V., kand. tekhn. nauk, dots.; SELEZNEV, V.M., kand. tekhn.nauk; GILYAROV, N.P., dots., kand. tekhn. nauk; KOSTENKO, N.M., inzh.; Prinimali uchastiye: GRIGOR'YEV, S.N., inzh.; TEREKHOV, I.B., inzh.; KHIZHOV, B.M., inzh., red.; VOLCHOK, K.M., tekhn. red.

[Practical manual on channel improvement operations in inland waterways]Prakticheskoe posobie po proizvodstvu vypravitel'nykh rabot na vnutrennikh vodnykh putiakh. Leningrad, Izd-vo "Rechnoi transport," 1961. 275 p. (MIRA 16:2)

1. Russia (1917- R.S.F.S.R.)Glavnoye upravleniye vodnykh putey i gidrotekhnicheskikh sooruzheniy.
(Rivers--Regulation)

TETERIN, P.K.; LUK'YANOV, V.P.; KAREVA, Ye.N.; Prinimali uchastiye:
BRUN'KO, S.T.; TEREKHOV, I.F.

Improved procedure for the manufacture of 1Kh21N5T steel rings.
Kuz.-shtam.proizv. 5 no.3:13-16 Mr '63. (MIRA 16:4)
(Steel forgings) (Forging)

TEREKHOV, I.I.

Mechanization of chip removal. Mashinostroitel' no.8:38-41 Ag '65. (MIRA 18:11)

TEREKHOV, I. N.

Degaussing and compass deviations. Moskva, Morskoi transport, 1945. 101 p.
(51-16910)

VK577.T4

1. Compass.

TEREKHOV, I.N., kand.tekhn.nauk, dotsent, kapitan 1 ranga; SMIRNOVSKIY, A.F., inzh.-kapitan, red.; MERKIN, D.B., kand.fiz.-matem.nauk, starshiy nauchnyy sotrudnik, red.; SHMAKOV, N.A., kapitan-leytenant, red.; BERDNIKOVA, Ye.B., tekhn.red.

[Brief course in radio deviation] Kratkii kurs radiodeviatsii. Moskva, Voen.izd-vo M-va vooruzhennykh sil SSSR, 1947. 85 p. (MIRA 14:1)

1. NIGShI voyenno-morskikh sil (for Terekhov).
(Radio in navigation)

CHERNENKO, A.R.; SIMFOROV, G.Ye.; SHKUTA, E.I.; TEREKHOV, I.P.; POLYANSKIY, F.S.; PISANKO, K.S.; SHENDRIK, V.K.; AL'TSHULER, M.A.; RIVKIN, I.D.; ENGEL', Ya.R.; CHETYRKIN, M.I., red.izd-va; PYL'NEN'KIY, A.A., red.izd-va; OSVAL'D, M.Ya., red.izd-va; PROZOROVSKAYA, V.L., tekhn.red.

[Sharp increase in the labor productivity of Krivoy Rog Basin miners; practices in the "Bol'shevik" and "Gigant" mines] Krutoi pod"em proizvoditel'nosti truda gorniakov Krivbassa; iz opyta raboty shakht "Bol'shevik" i "Gigant." Moskva, 1960. 173 p. (MIRA 13:11)
(Krivoy Rog Basin--Iron mines and mining--Labor productivity)

TEREKHOV, I. P., gornyy inzh.; SHENDRIK, V. K., gornyy inzh.; POLYANSKIY, F. S., gornyy inzh.

Ore-mining techniques and equipment and the organization of labor in Krivoy Rog Basin mines should be changed. Gor. zhur. no.10:17-21 O '62. (MIRA 15:10)

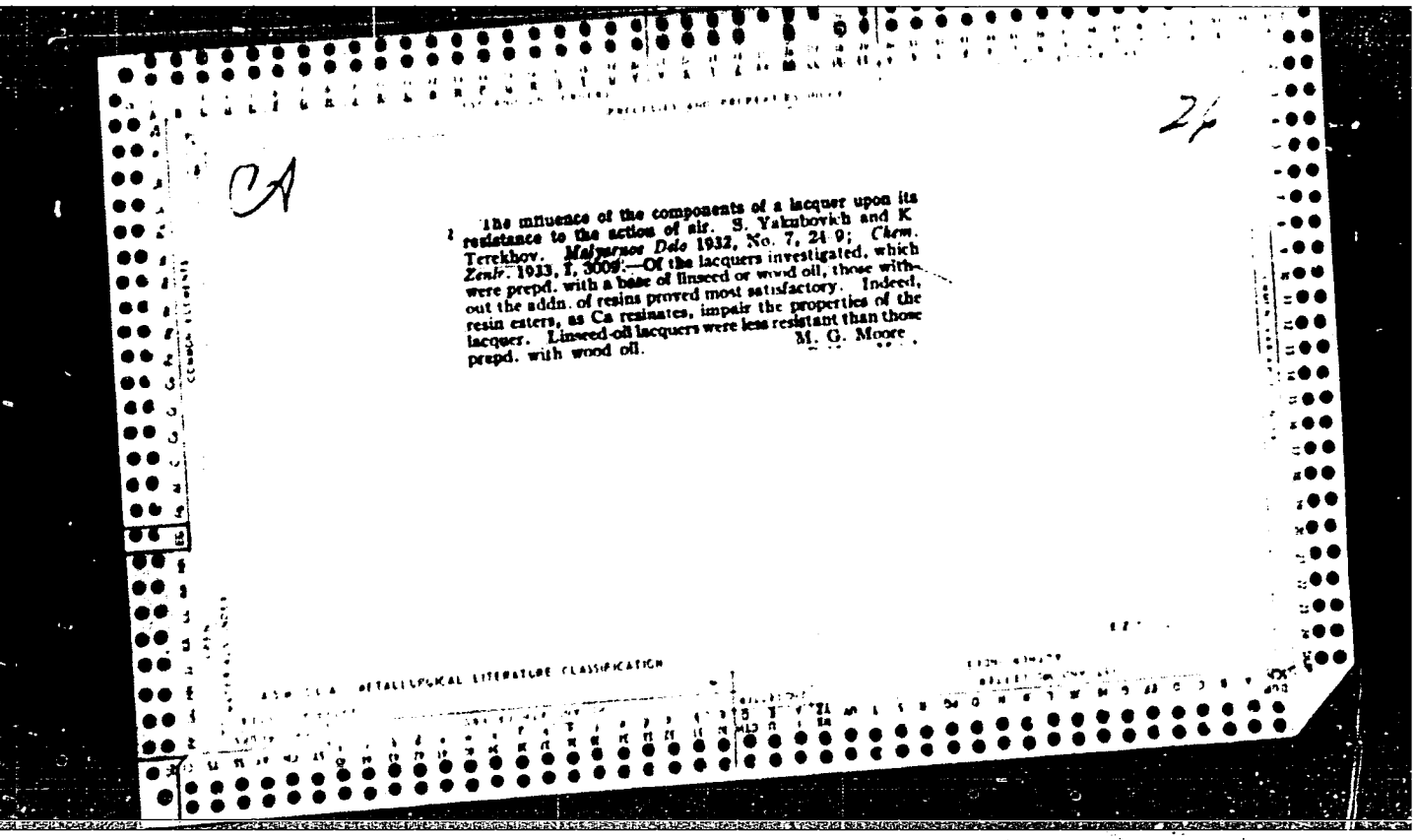
1. Nauchno-issledovatel'skiy gornorudnyy institut, Krivoy Rog.

(Krivoy Rog Basin—Iron mines and mining)

TPREKHOV, I.V.; MIROSHNICHENKO, A.G.; NEMCHENKO, G.V.; DINEVICH, V.G.

Frogs of tractor-driven plows from high-strength cast iron.
Trakt. i sel'khozmash. no.4:45-46 Ap '65. (MIRA 18:5)

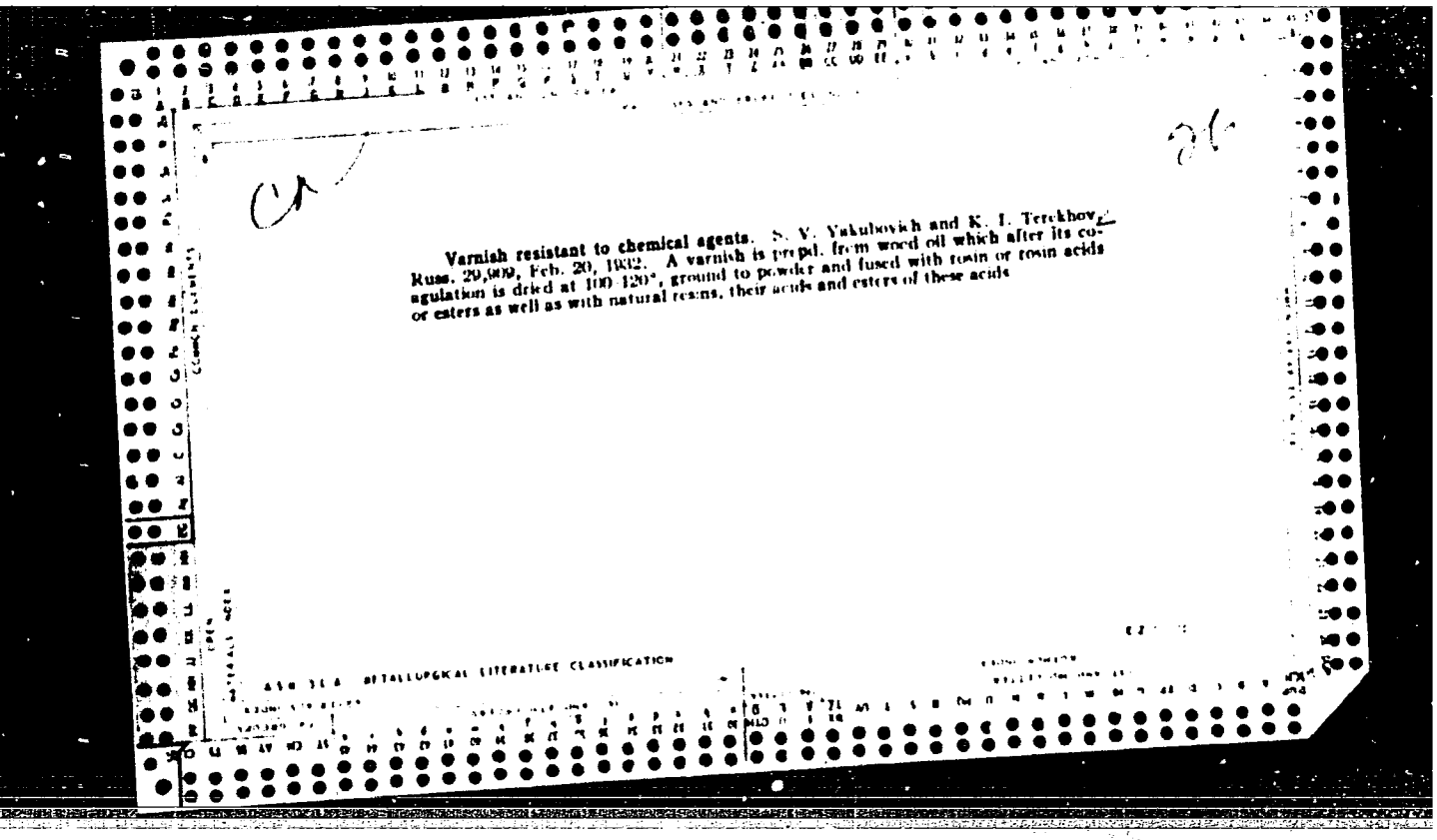
1. TSentral'noye konstruktorsko-tekhnologicheskoye byuro Gosudarstvennogo komiteta po mashinostroyeniyu pri Gosplane SSSR, Odessa.



CA

24

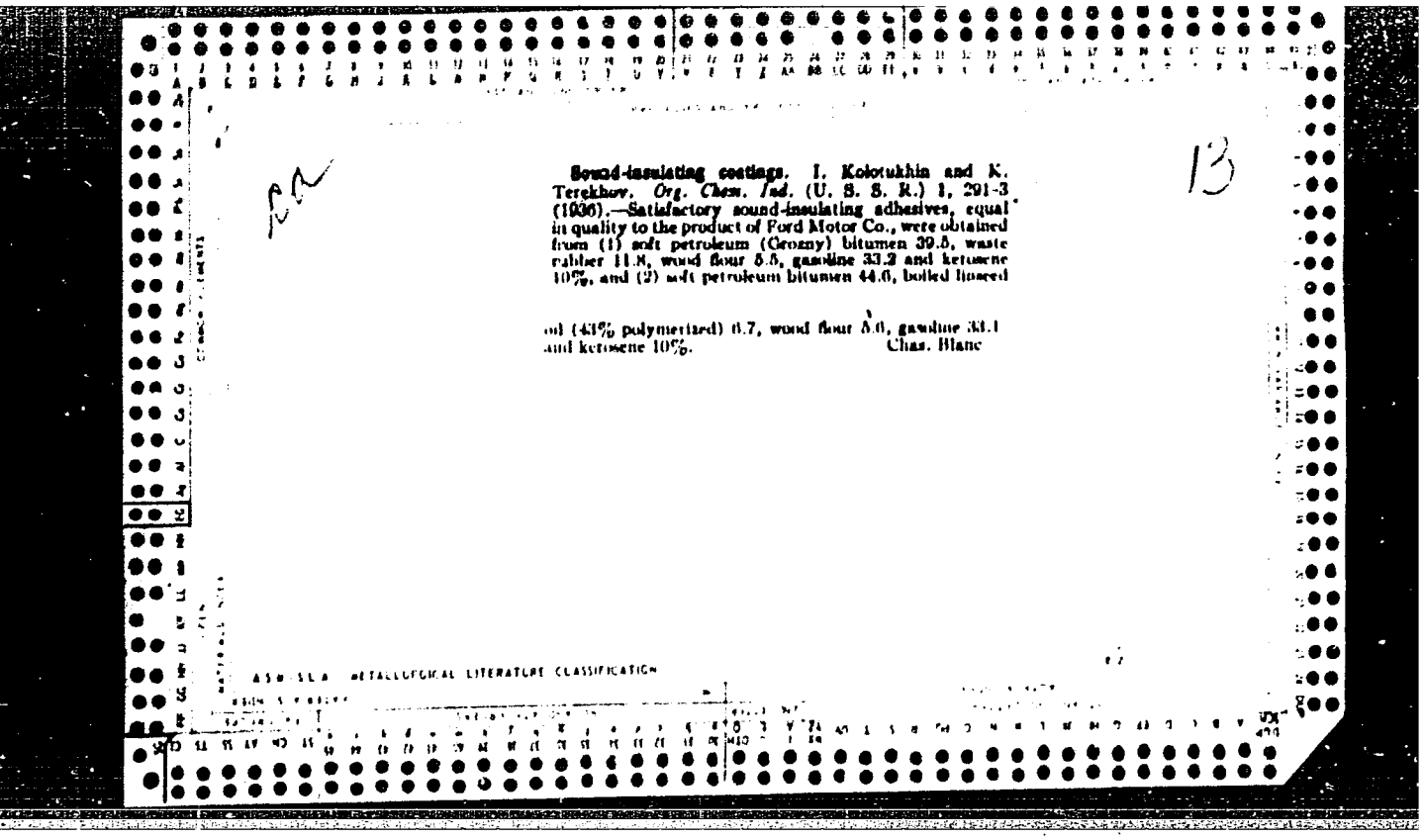
The influence of the components of a lacquer upon its resistance to the action of air. S. Yakubovich and K. Terekhov. *Maĭpravoe Delo* 1932, No. 7, 21-9; *Chem. Zentr.* 1933, I, 3009.—Of the lacquers investigated, which were prepd. with a base of linseed or wood oil, those without the addn. of resins proved most satisfactory. Indeed, resin esters, as Ca resinates, impair the properties of the lacquer. Linseed-oil lacquers were less resistant than those prepd. with wood oil. M. G. Moore



Varnish resistant to chemical agents. S. V. Yakubovich and K. I. Terekhov. Russ. 29,809, Feb. 20, 1932. A varnish is prepd. from wood oil which after its coagulation is dried at 100-120°, ground to powder and fused with rosin or rosin acids or esters as well as with natural resins, their acids and esters of these acids

TEREKHOV, K.

The effect of the degree of polymerization and the degree of oxidation of the oil on the stability of the films in the atmosphere. S. Yakubovich and K. Terekhov. *Trudui Nauch.-Issledovatel. Inst. Lakov i Krasok.* No. 1 (*Film-Forming Substances*), 40-51(1938).—The expts. were carried out with Russian linseed and Chinese tung oils. *Lacquers.*—The oxidized and polymerized tung oils are more resistant than linseed oils. Lacquers prepd. from mixts. of oils treated individually are more resistant than those treated in mixts. An increase in the proportion of tung oils in the mixts. improves the stability of lacquers. The properties are not improved by mixing oxidized and polymerized oils. *Enamels.*—The tung oils are more resistant than linseed oils to oxidation and polymerization. The oxidized oils are more stable than the polymerized oils. Enamels prepd. from separately treated ingredients differ little from those prepd. from mixts. treated after mixing. A higher proportion of tung oil improves the stability of enamels. The mixing of oxidized and polymerized oils does not yield favorable results, although a mixt. of linseed oils is better than that of tung oils. It is concluded that the method of prepn. and the degree of condensation have a great influence on the resistance of enamels toward the effects of the atm. The expts. are described. A. A. Bochtlingk



Sound-insulating coatings. I. Kolotukhin and K. Terekhov. *Org. Chem. Ind.* (U. S. S. R.) 1, 291-3 (1936).—Satisfactory sound-insulating adhesives, equal in quality to the product of Ford Motor Co., were obtained from (1) soft petroleum (Grozny) bitumen 39.5, waste rubber 11.8, wood flour 5.5, gasoline 33.2 and kerosene 10%, and (2) soft petroleum bitumen 44.6, boiled linseed oil (43% polymerized) 6.7, wood flour 5.0, gasoline 33.1 and kerosene 10%. Chas. Blanc

ASM SLA METALLURGICAL LITERATURE CLASSIFICATION

[illegible], K. I., Engr. [illegible] Coal. Test. Lab.

Dissertation: "[illegible] and Methods for Improving [illegible] Cyaniding." Central Sci Res Institute of Technology and Chemical Engineering, [illegible], 21 Apr 47.

SO: Vechernyaya Moskva, Apr, 1947 (Project #17836)

VORONOV, S.M., professor, doktor tekhnicheskikh nauk; TEREKHOV, K.I., kandidat tekhnicheskikh nauk, rukovoditel' Zaochnykh kursov, otvetstvennyy redaktor: SIDORIN, I.I., professor, rukovoditel' Zaochnykh kursov po uchebnoy chasti, nauchnyy redaktor; MATVEYEVA, Ye.N., tekhnicheskiy redaktor

[Workable aluminum alloys] Deformiruemye aliuminievye splavy. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1951. 74 p. (Zaochnye kursy usovershenstvovaniia inzhenerov metallovedov-termistov, 34) (MLRA 9:10)
(Aluminum alloys)

TERENTYEV, A.I.

PHASE I BOOK EXPLOITATION SOV/3559

Akademiya nauk SSSR. Institut metallurgii. Nauchnyy sovet po probleme zharoprochnykh splavov

Issledovaniya po zharoprochnym splavam, t. 5 (Investigations of Heat-Resistant Alloys, Vol 5) Moscow, Izd-vo AN SSSR, 1959. 425 p. Errata slip inserted. 2,000 copies printed.

Ed. of Publishing House: V.A. Klimov; Tech. Ed.: I.F. Kuz'min; Editorial Board: I.P. Bardin, Academician, G.V. Kurdyumov, Academician, N.V. Ageyev, Corresponding Member, USSR Academy of Sciences (Resp. Ed.), I.A. Oding, I.M. Pavlov, and I.F. Zudin, Candidate of Technical Sciences.

PURPOSE: This book is intended for metallurgical engineers, research workers in metallurgy, and may also be of interest to students of advanced courses in metallurgy.

COVERAGE: This book, consisting of a number of papers, deals with the properties of heat-resisting metals and alloys. Each of the papers is devoted to the study of the factors which affect the properties and behavior of metals. The effects of various elements such as Cr, Mo, and W on the heat-resisting properties of various alloys are studied. Deformability and workability of certain metals as related to the thermal conditions are the object of another study described. The problems of hydrogen embrittlement, diffusion and the deposition of ceramic coatings on metal surfaces by means of electrophoresis are examined. One paper describes the apparatus and methods used for growing monocrystals of metals. Boron-base metals are critically examined and evaluated. Results are given of studies of interatomic bonds and the behavior of atoms in metal. Tests of turbine and compressor blades are described. No personalities are mentioned. References accompany most of the articles.

4/5

TEREKHOV, K.I.; LASHKO, N.F.; SOROKINA, K.P.

Phase constitution, structural transformations and heat resistance in chromium-nickel-manganese steel. Issl.po zharopr.splav. 8:155-161 '62. (MIRA 16:6)
(Steel, Heat-resistant--Metallography)
(Phase rule and equilibrium)

S/129/60/000/009/003/009
E193/E483

AUTHORS: Getsov, L.B., Engineer, Zhirnov, D.F., Terekhov, K.I. and Taubina, M.G., Candidates of Technical Sciences

TITLE: The Effect of Structure on the High Temperature Properties of Alloys

PERIODICAL: Metallovedeniye i termicheskaya obrabotka metallov, 1960, No.9, pp.12-16

TEXT: Having determined experimentally the relationship between the degree of preliminary deformation and the grain size of recrystallized material, the authors studied the effect of grain size on the mechanical properties of steel EI481 and alloy EI437B. The mechanical tests were carried out both on laboratory test pieces with a predetermined grain size and on specimens cut from finely- and coarsely-crystalline portions of industrial forgings. The short-time strength of the steel EI481 at room and elevated temperatures was not affected by the variation of the grain size. However, the time-to-rupture of specimens with the grains varying in size between 0.5 and 5 mm, and determined at 550, 600 and 650 °C, was considerably lower than that of specimens with uniform, finely-crystalline structure. U.T.S., elongation and reduction of area

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S/129/60/000/009/003/009
E193/E483

The Effect of Structure on the High Temperature Properties of Alloys

of alloys EI437B at 20 and 700°C, decreased with increasing grain size but the creep properties of this alloy were not affected by this factor, probably because the maximum grain size obtained (2 mm) was not sufficiently large to produce measurable effects. A.P.Ozerova, N.D.Shakhbazova, M.V.Malyutina and L.B.Aleksandrova participated in the experiments. There are 5 figures and 3 tables.

Card 2/2

ACC NR AT6035511 SOURCE CODE: UR/2531/66/000/185/0044/0054

AUTHOR: Son'kin, L. R.; Razbegayeva, Ye, A.; Terekhova, K. M.

ORG: none

TITLE: Meteorological conditions causing atmospheric pollution over cities

SOURCE: Leningrad. Glavnaya geofizicheskaya observatoriya. Trudy, no. 185, 1966. Voprosy atmosfernoy diffuzii i zagryazneniya vozdukha (Problems of atmospheric diffusion and air pollution), 44-54

TOPIC TAGS: micrometeorology, ~~atmospheric~~ air pollution, ~~urban~~ smog, dust, sulfur dioxide, sulfur compound, atmospheric precipitation

ABSTRACT: This article begins with a five-page survey of possible correlations between atmospheric pollution and meteorological factors. The authors relied chiefly on 1961-1963 data on dust and sulfur dioxide pollution supplied by the Leningrad Municipal Sanitation-Epidemiological Service. Samples were obtained at 14 points in Leningrad, usually twice a week, with some gaps of a day or more. Summer observations were more complete than winter observations. Data from Moscow, Donetsk, Makeyevka, Novosibirsk, Kemerovo, and Prokop'yevsk were utilized to some extent.

Card 1/6 UDC: none

The first stage of the project was to get a general picture of the atmospheric pollution in some cities, especially in Leningrad. Cases in which dust concentrations were above the maximum tolerance limit amounted to 17% of the total number of observations in Leningrad in 1961-1963, and excessive sulfur dioxide pollution provided 19%. The corresponding figures for Moscow (about 5000 samples) in 1962-1964 were 7% and 10%. The next step was to construct graphs showing the variations of atmospheric contamination in cities (Figs. 1 and 2). There was a tendency for air pollution maxima to appear over the Donbass and the Kuzbass in the spring time. The data failed to indicate the existence of winter maxima caused by heating of buildings, nor was there a definite analysis of data on correlation between concentrations of dust, sulfur dioxide, and wind directions. The dependence of dust and

ACC NR: AT6035511

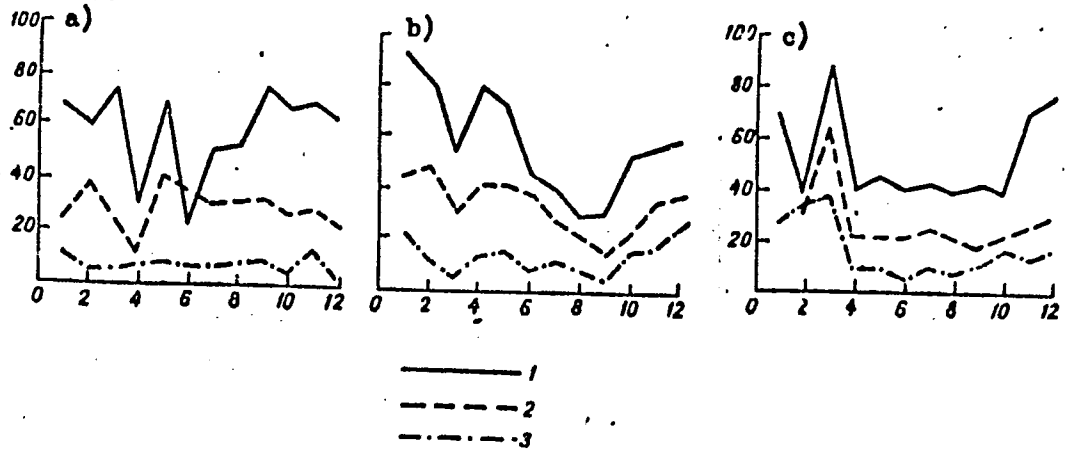

Fig. 1. Annual rate of dust settling in Leningrad, after N. M. Tomson

1 - Industrial areas; 2 - residential areas; 3 - park zone; a - 1940; b - 1953; c - 1954.

Card 3/6

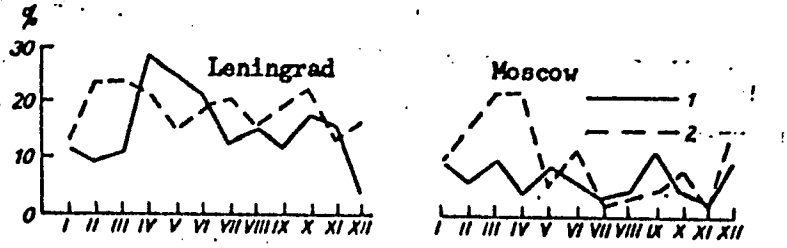

Fig. 2. Annual variation in frequency of dust and sulfur dioxide concentrations exceeding the maximum tolerable concentration

1 - Dust; 2 - sulfur dioxide.

sulfur dioxide concentrations on wind speeds is shown in Fig. 3. As might be expected, strong winds were most effective in cleansing the air. Although no data on reduc-

ACC NR: AT6035511

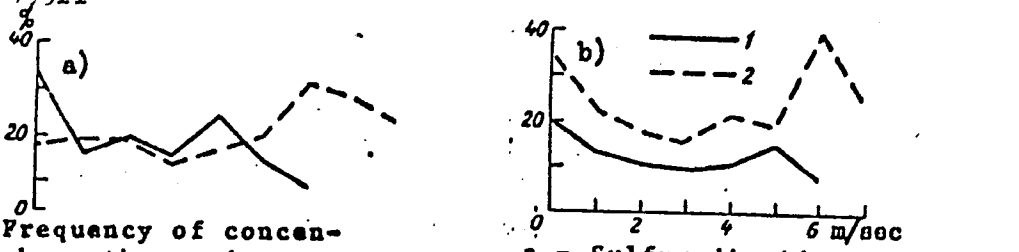

Fig. 3. Frequency of concentrations above the maximum tolerable concentration as a function of the wind speed

a - Sulfur dioxide; b - dust; 1 - during the cold half of the year; 2 - during the warm half of the year.

tion in pollution by precipitation was available, it was possible to study the restoration of the background level of contamination following precipitation; heavy precipitation proved effective in clearing the air. Another, still preliminary result, was that pollutant concentrations in industrial cities like Leningrad generally are not deter-

Card 5/6

ACC NR: AT6035511

Table 1. Frequency (%) of dust concentrations exceeding the maximum tolerable concentration under different synoptic conditions

Time of year	Synoptic situation		
	Anti-cyclone	Cyclone	Intermediate field
Cold.	30	5	12
Warm.	22	9	19

mined directly by the sources of contamination, but by the presence of some background concentration and are chiefly associated with anticyclones, particularly with slow-moving, strong anticyclones. Frequencies of dust concentrations above the maximum tolerable level under various synoptic conditions are given in Table 1. Orig. art. has: 4 figures and 3 tables.

[WA-50; CBE No. 14]
[ER]

SUB CODE: 04/ SUBM DATE: none/ ORIG REF: 011/ OTH REF: 014

Card 6/6

TEREKHOV K.S.

AUTHOR: Terekhov, K.S., Engineer. 122-3-26/30

TITLE: An Efficient Selection of Special Equipment in Plants for Experimental and Small Batch Manufacture (Ratsional'nyy vybor spetsosnashcheniya na zavodakh opytnogo i melkoseriynogo proizvodstva)

PERIODICAL: Vestnik Mashinostroyeniya, 1957, No.3, pp. 69 - 73 (USSR).

ABSTRACT: The great savings obtainable by the use of simplified tooling are illustrated. Compared with the standard punching and blanking press-tool with a life of 50 000 components, a simplified press tool with a life of up to 5 000 components costs 96 000 Roubles instead of 1 280 000 Roubles. Similar relations are stated for simplified bending and drawing tools. The use of universal built-up press tools assembled from standard elements is shown in one example. The number of press tools for one experimental machine was reduced from 1 000 to 8. The design of a rapidly-interchangeable die and the associated die inserts are illustrated. Several illustrations show the use of machining fixtures assembled from universal units. In one plant more than 10 000 fixtures were assembled from universal elements during two years. A chart shows an assortment of plastic components machined from blanks pressed into moulds

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122-3-26/30

An Efficient Selection of Special Equipment in Plants for Experimental and Small Batch Manufacture.

with inter-changeable die inserts, also illustrated.

There are 6 figures, 3 tables and 6 references, 5 of which are Slavic.

AVAILABLE: : Library of Congress.

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TYRSKHOV, K.S.

Using the method of soldering by soft solders for obtaining permanent connections of metals with porcelain. Priborostroenie no.6:26-27 Je '57. (MLRA 10:7)

(Solder and soldering)

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Reasonable selection of special equipment for experimental and small-lot production plants. Vest.mash.37 no.3:69-73 Mr '57. (MLRA 10:4)

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(Economics, Mathematical) (Electronic computers)

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New data on the stratigraphy of the Alazeya Plateau. Sov.geol. 5 no.2:140-144 F '62. (MIRA 15:2)

1. Severo-Vostochnoye geologicheskoye upravleniye Glavgeologii RSFSR.
(Alazeya Plateau--Geology, Stratigraphic)

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Find of Psilophytales in Devonian deposits of the middle basin of the Kolyma River. Dokl. AN SSSR 143 no.4:931-934 Ap '62. (MIRA 15:3)

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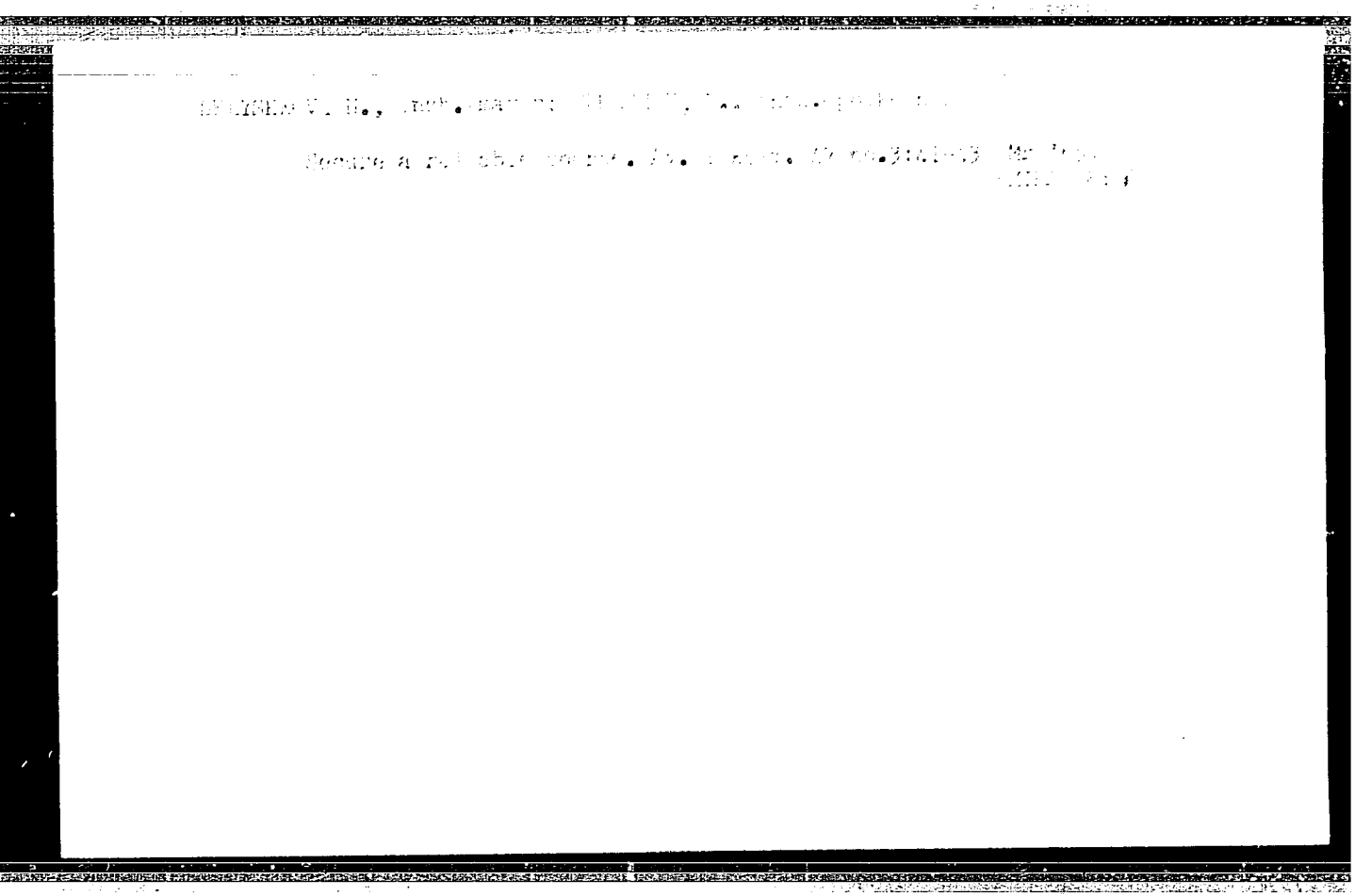
(Yasachnaya Valley--Paleobotany, Stratigraphic)



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[Theory and design of principal radio circuits using transistors] Teoriia i raschet osnovnykh radiotekhnicheskikh skhem na tranzistorakh. [By] I.I.Akulov i dr. Moskva, Sviaz'izdat, 1963. 452 p. (MIRA 16:8)

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